

Page 37, line 14, change "532" to --530--, change "30" to --34--, and change "32" to --36--; and

line 15, after "bracket" insert --550--, change "33" to --37--, and change "35" to --39--.

Page 38, line 12, delete "the at is,".

Page 43, line 3, before "40" insert --housing assembly--.

IN THE ABSTRACT:

Please replace the original abstract of the invention with the new abstract provided on the separate sheet attached hereto.

IN THE CLAIMS:

Please **AMEND** claims 1-15, and **ADD** new claims 16-20, as follows:

1. (Amended) A [suction-type] vacuum seed metering apparatus operably arranged in combination with a seed storage hopper, said seed metering apparatus comprising:

a disc vertically mounted for driven rotation about [a fixed rotary path of movement] an axis and having a circular row of apertures adjacent to a periphery of said disc for movement along a predetermined path during rotation of the disc; and

a housing arranged in seed receiving relation relative to said seed hopper, said housing having [its] an interior divided by said disc into two adjacent enclosures, [with] one enclosure at least partially defining a seed chamber [for] to hold seeds therein, and [with] the other enclosure extending at least partially around the path of movement of the [disc] apertures

[and constitutes] to define a vacuum chamber having a leading end and a trailing [ends] end with [an opening leading to] a vacuum exhaust port in communication with said vacuum chamber intermediate said leading and trailing ends, [with] said trailing end of said vacuum chamber being arranged adjacent to a seed drop area from whence seeds [gravitationally fall for deposit in a furrow] are released from the disc, and wherein said housing [is provided with an opening arranged proximate to the seed drop area for enhancing the release of seeds from the disc of the metering apparatus] further includes an axially extending circumferential wall having a circumferential opening therein, the circumferential opening being sized to allow air to flow into the seed chamber along at least a portion of the path of movement of the apertures.

2. (Amended) The seed metering apparatus according to Claim 1 wherein said housing [comprises] includes a split assembly [including] having a first housing portion to be [that is carried by and] connected to said hopper and a second housing portion [that] releasably [connects] connected to said first housing [and permits] to permit access to said interior of [said] the housing when said second housing portion is removed from said first housing portion.

3. (Amended) The seed metering apparatus according to Claim 2 wherein said first housing portion includes [an] the axially extending circumferential wall arranged [in surrounding relation] proximate to a substantial portion of [the] an outer peripheral edge of said first housing portion [, wherein said circumferential wall defines a circumferential opening therein, and wherein said circumferential opening is specifically sized to allow atmospheric air to flow into said housing on that side of the disc opposite from said vacuum chamber to inhibit seeds released

from said disc from being drawn upwardly under the influence of said vacuum thereby effecting uniform spacings between seeds].

4. (Amended) The seed metering apparatus according to Claim 1 wherein said disc has a circular periphery measuring about 300 mm. in diameter [is flat and enhances direct seed release of seeds].

5. (Amended) The seed metering apparatus according to Claim [1] wherein said opening provided in said housing [comprises] proximate to the seed drop area includes a plurality of [vertically] spaced [and elongated slots defined by said enclosure defining the] holes to allow air [in this chamber to be equal that on the outside] to enter therethrough into the seed drop area.

6. (Amended) A seed metering apparatus operably arranged in combination with a seed storage hopper, said seed metering apparatus comprising:

a disc mounted for driven rotation about [a fixed rotary path of movement] an axis and having a circular row of apertures adjacent to a periphery of said disc for movement along a predetermined path during rotation of the disc; and

a housing arranged in seed receiving relation relative to said seed [hoper] hopper, said housing having [its] an interior divided by said disc into two adjacent enclosures, [with] one enclosure [serving as] defining a seed reservoir and the other enclosure [lying around] located along a portion of the path of [motion] movement of the apertures [, defining] to define a vacuum

chamber [with] having a leading end and a trailing [ends] end, wherein the trailing end of said vacuum chamber [of said being] is disposed proximate to a seed discharge area from whence seeds are [gravitationally deposited into a furrow] released from the disc, and wherein said housing [defines] is provided with an opening arranged proximate to the seed discharge area of the metering apparatus [for promoting] to promote the release of [sees] seeds from the disc in the seed discharge area of the metering apparatus.

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7. (Amended) The seed metering apparatus according to Claim ~~6~~ wherein said housing is comprised of a releasably interconnectable first and second [housings] housing portions arranged in seed receiving relation relative to said seed storage hopper.

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8. (Amended) The seed metering apparatus according to Claim ~~7~~ wherein said first housing portion includes [defines a rigid member having an upright] a rim extending circumferentially thereabout to define the seed reservoir [opening] in seed receiving relation relative to the seed storage hopper and a drop chute for discharging seeds [to a furrow] from the seed metering apparatus, and wherein said second housing portion has a [disc like] shape sized to combine with the rim of said first housing portion thereby closing said housing when said first and second [housings] housing portions are connected to each other.

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9. (Amended) The seed metering apparatus according to Claim ~~8~~ wherein said second housing portion defines an air cut-off formed integrally with said second housing portion in the seed [drop] discharge area.

10. ¹³ (Amended) The seed metering apparatus according to Claim [5] ⁸ wherein said disc has a circular periphery measuring about 300 mm. in diameter.

11. ¹⁴ (Amended) The seed metering apparatus according to Claim [5] ⁸ wherein the opening [defined by] provided in said housing [comprises] includes a plurality of [vertically] spaced holes [defined by said enclosure serving as said seed reservoir] to allow air to enter into the seed discharge area.

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12. ¹⁵ (Amended) A seed metering apparatus for receiving seeds from a seed [hoper] hopper and [depositing] discharging the seeds at substantially regular intervals [into a furrow], said seed metering apparatus comprising:

- a vacuum source;
- a housing assembly [comprising] including a first housing portion and a second housing portion to be releasably interconnected [housing] together, said first housing portion having an open sided cavity framed by a circumferential rim with [the lower portion] at least part of said cavity defining a seed reservoir that receives seeds from said seed hopper, a drop chute formed integral with said first housing portion in separated relation from said seed reservoir and extending from a seed discharge area of said housing assembly [for discharging] to discharge seeds from said housing assembly [toward said furrow], said second housing portion having an interior surface arranged in operable combination with the rim of said first housing portion to close said cavity, said second housing portion defining a vacuum chamber [with] having a leading end and a trailing [ends] end and [an opening leading to said chamber] a vacuum exhaust

port in communication with the vacuum chamber between the leading and trailing [end] ends thereof and connectable to said vacuum source, at least one of said first and second housing portions having an opening arranged proximate to the seed discharge area of said housing assembly; and

a disc [shaped] metering member [having a periphery] rotatably [fitting] positioned within said rim of said first housing portion and having a series of openings arranged [toward] proximate to a [margin] periphery of said disc [for receiving a seed] to receive seeds under the influence of pressure differentials acting thereon, said disc being rotatably mounted such that each opening in the disc is sequentially brought into communication with said seed reservoir and advances along a predetermined path of movement toward said drop chute [whereas] whereat seeds are separated [from] from the disc and pass into said drop chute for discharge [to the furrow] from the seed metering apparatus, the opening arranged proximate to the seed discharge area promoting the release of seeds from the disc in the seed discharge area.

13. (Amended) The [second] seed metering apparatus according to Claim 12 wherein the circumferential rim of said first housing portion defines a circumferentially elongated [slot] opening [specifically] sized to allow atmospheric air to flow into said housing assembly along at least a portion of the path of movement of the openings on a side of said disc opposite from said vacuum chamber [to inhibit seeds released from said disc from being drawn upwardly under the influence of said vacuum to effect uniform spacing between adjacent seeds].

14. ¹⁸ (Amended) The seed metering apparatus according to Claim ¹⁷ ~~13~~ wherein the opening arranged proximate to the seed discharge area is formed in said first housing [further includes] as a plurality of [vertically] spaced [rows of] openings [in the seed discharge area of the housing assembly for facilitating release of seeds from said disc].

15. ¹⁹ (Amended) The seed metering apparatus according to Claim ¹⁶ ~~12~~ wherein said second housing portion further includes [defines] an air cut-off formed integrally therewith [in] proximate to the seed discharge area of the housing assembly.

-- 16. ⁵ The seed metering apparatus according to Claim 1 wherein the housing is further provided with an opening therethrough proximate to the seed drop area to enhance the release of seeds from the disc.

17. ⁷ The seed metering apparatus according to Claim ⁵ ~~16~~ wherein the opening provided in the housing proximate to the seed drop area includes an elongate slot adjacent to the trailing end of the vacuum chamber.

18. ¹⁵ The seed metering apparatus according to Claim ⁸ ~~6~~ wherein the opening provided in the housing proximate to the seed discharge area includes an elongate slot adjacent to the trailing end of the vacuum chamber.